

COURTESY COPY OF PENDING CLAIMS IN USSN 09/930,329
(as amended on February 11, 2003)

12. (Cancelled).

13. (Cancelled).

26. (New) A method of expressing a foreign gene product in a plant cell, the method comprising:

providing a chromosomally integrated transgene in a plant cell, wherein the transgene comprises a replicon having a plus sense, RNA viral replication origin and at least one foreign gene capable of expression in a plant or a plant cell, wherein said replicon is transcribed from a promoter, and wherein said replicon is dependent for replication on a helper virus;

providing the helper virus, wherein the helper virus comprises a plus sense, RNA viral replicase;

transcribing the transgene using a host RNA polymerase II, to form recombinant mRNAs comprising the replicon;

replicating the recombinant mRNAs with the plus sense, RNA viral replicase, thereby producing additional replicon components; and

producing subgenomic mRNA from the additional replicon components, thereby expressing the foreign gene product in the plant cell.

27. (New) The method of claim 26, wherein providing the chromosomally integrated transgene comprises:

a) introducing the transgene into the plant cell by transformation; and

b) growing a transgenic plant to an optimal stage prior to providing the helper virus.

28. (New) The method of claim 26, wherein providing the helper virus comprises infecting the plant cell with the helper virus.

29. (New) The method of claim 26, wherein producing the subgenomic mRNA further comprises self-cleaving the mRNA.

30. (New) The method of claim 26, wherein producing the subgenomic mRNA further comprises translating the mRNA.

31. (New) The method of claim 26, wherein the at least one foreign gene product comprises an antisense RNA, a ribozyme, a regulatory enzyme, a structural protein, or a therapeutic protein.

32. (New) The method of claim 31, wherein the therapeutic protein comprises an interleukin or a colony stimulating factor.

33. (New) The method of claim 26, wherein the replicon codes for at least one sequence upon which the helper virus is dependent.

34. (New) The method of claim 33, wherein the at least one sequence upon which the helper virus is dependent comprises a functional movement protein, and wherein the replicon further comprises a sequence encoding the functional movement protein, thereby enabling systemic infection of a whole plant and systemic expression the foreign gene product in the plant.

35. (New) The method of claim 26, wherein the plant cell comprises a cell susceptible to tobamovirus, and wherein the replicon comprises tobamoviral-derived sequences.